Response ID ANON-YJXB-3MPC-G

Submitted to **Reformed Functional Skills Mathematics and English Subject Content**
Submitted on **2017-11-07 16:23:40**

Introduction

1 Does the proposed subject content cover the appropriate knowledge and understanding for Functional Skills in these subjects?

No

Comments text box:
MEI's expertise is in mathematics and so we are responding only for the Functional Skills in that subject at levels 1 and 2.

The proposed subject content is not clear. It states that underpinning knowledge is to be tested in its own right but does not specify what that underpinning knowledge is. The consultation document states the following.

In order to ensure that a student's underpinning skills are being assessed, Ofqual will require both calculator and non-calculator assessment and is consulting separately on a proposal to introduce weightings for calculator and non-calculator based assessment.

This suggests (but does not actually say) that the underpinning skills include non-calculator methods. If that is the case, it is also not clear what non-calculator methods are expected – presumably it is an appropriate subset of the content. Surely no-one thinks that being able to calculate compound interest without a calculator, for example, is a key skill needed for employment.

Is "underpinning knowledge" the same as "underpinning skills" or different? If these two phrases mean the same then it is not clear why they are both being used. If they mean something different then it is impossible to infer what they mean from the consultation documents.

The content document seems to imply that the underpinning skills may be tested without being used in mathematical problem solving. If the underpinning skills are non-calculator methods then it seems extraordinary that they would be tested without being used in problem solving. Non-calculator papers for GCSE do not exclude problem solving – it is not appropriate for Functional Skills qualifications to be less functional than GCSE. Assessing problem solving will naturally include assessment of underpinning skills, whatever they are.

If a non-calculator assessment of basic calculations is intended by, "underpinning skills/knowledge" then being able to work with simple numbers and estimate answers without a calculator is appropriate for functionality but careful consideration must be given to whether a separate non-calculator assessment of mental arithmetic methods is practical in all the various situations in which functional skills qualifications are currently delivered.

The scope of the content document is not clear. For example, in level 2 statement 1 says that students at level 2 are expected to compare positive and negative numbers. So, at level 2 a student would know that -5°C is colder than 3°C. But would the students also be expected to know that 3°C is 8°C more than -5°C? Perhaps this is included in statement 2 but it is inconsistent for this to refer to "numbers" when statement 1 refers to "positive and negative numbers". Statement 2 should either refer to "positive and negative numbers" or to "positive numbers" to make it clear what is intended.

It is particularly important for centres to understand what is (and what is not) included in the content so that they can teach learners appropriately. The content should be clearly stated using correct and consistent terminology.

Functional skills qualifications (at level 1 and 2) have the following stated purpose,

a qualification for work, study and life. Achievement of the qualification demonstrates a sound grasp of mathematical skills at the appropriate level and the ability to apply mathematical thinking effectively to solve problems successfully in the workplace and in other real life situations.

The qualifications should not include content which does not readily lend itself to problem solving in real life situations at an appropriate level.

The omission of a specific mention of currency conversions seems unusual given that this is a natural context for the use of ratio and proportion.

Given that making decisions based on data is becoming a key part of many vocations and is vital to making informed choices as an adult, we feel there should be greater emphasis on the use and misuse of data and percentages in the specification.

A significant amount of work has been undertaken to understand public perceptions of risk, this has revealed that in general people understand probabilities expressed as relative frequencies. As a result public advice leaflets and media report are now using this format much more. This has led to the introduction of frequency trees at GCSE. There is no reference to risk or to relative frequency for probability in the content document.

There is no mention of use of ICT. This is a serious omission. The employers' survey conducted as part of the Functional Skills reform process found that larger employers place importance on the use of ICT, including spreadsheets.

It is not clear why content numbers 27 and 28 at level 1 are restricted to discrete data nor why line graphs have been grouped with bar charts and pie charts. Line graphs are often understood as graphs for time series (which are bivariate data and belong better with scatter diagrams at level 2) – perhaps thin bar charts are intended by the term "line graph" here? This needs to be clarified and working with continuous data needs to be included somewhere.

2 At Entry levels: Does the content cover the key elements of literacy and numeracy needed to support learners to progress to higher levels of study in English and mathematics?

Not Sure

Comments in text box:
This is not our area of expertise.

3 At Levels 1 and 2: Does the content cover the key elements of literacy and numeracy needed for employment?

No

Comments in text box:
See answer to question 1.

4 At Levels 1 and 2: Will the proposed qualifications secure sound progression for the purposes of progression into further study?

No

Comments in text box:
Level 1 Functional Skills in Mathematics seem to provide reasonable progression to level 2 Functional Skills in Mathematics. However, Functional Skills qualifications are also used as stepping stones to GCSE Mathematics (for resit students). There is a tension between what is appropriate content for a Functional Skills qualification which assesses readiness to solve problems in the real world and a qualification that is a stepping stone to GCSE. It would be more appropriate to have qualifications which were designed as stepping stones to GCSE rather than expecting Functional Skills to also fulfil that role.

In view of the national poor success rates in GCSE resit, it would be even more appropriate to reconsider the appropriateness of the current GCSE for students who have already failed to achieve a standard pass (or anything close to one).

5 Does the proposed subject content provide assurance that essential knowledge taught in earlier levels is built upon and represented adequately?

Not Sure

Comments in text box:
Mathematics is, by nature, a synoptic subject so it is inevitable that essential knowledge from earlier levels will be built upon. Whether or not it is represented adequately is difficult to judge without reference to sample assessments.

6 Do any of the proposals have potential to have a disproportionate impact, positive or negative, on specific learner groups, in particular the 'protected characteristic' groups? (The protected characteristics are age, disability, gender reassignment, race, religion or belief, sex, sexual orientation, marriage and civil partnership, and pregnancy and maternity); if they have potential for an adverse impact, how can this be reduced?

No

Comments in text box:

7 Respondent category.

Subject expert

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